

REMARKS

This responds to the Office Action mailed on March 11, 2005.

No claims are canceled, amended, or added by way of this amendment. As a result, claims 1-36 are now pending in this application.

Rejection of Claims 1-36 Under 35 U.S.C. §112, Second Paragraph

Claims 1, 9, 17, 22, 27, and 32 were rejected under 35 U.S.C. §112, second paragraph, as being incomplete for “omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections”.

The Examiner made five points in his rejection, each of which will be discussed in turn below:

- 1) The Examiner asserted that the “omitted structural cooperative relationships” are “one or more execution-requesting clients” and “a plurality of workflow engines”.

In response, Applicants assert that regarding claim 1, for example, a clear cooperative relationship between the “one or more execution-requesting clients” and “a plurality of workflow engines” is set forth in the first operation or “step”. However, as an aid to the Examiner in more fully understanding claim 1, Applicants will briefly elaborate on the elements of claim 1 and their cooperative relationship.

In claim 1, a method is to be performed by a data processing system. The data processing system comprises a plurality of workflow engines. Thus, there are two or more workflow engines. The method provides distributed queuing of workflows among the plurality of workflow engines. Thus, there is more than one workflow. Execution of workflows is requested by one or more execution-requesting clients. Thus, there is at least one client. In claim 1, at least one client is requesting execution of two or more workflows. Because the method provides distributed queuing of workflows among a plurality of workflow engines, the two or more workflows, whose execution is requested by the at least one client, may be executed by one or more workflow engines.

2) The Examiner asserted that it is not made explicitly clear in the claim language whether the first client is linked only to the first workflow engine, and the second client linked only to the second workflow engine, and so on.

In response, Applicants assert that regarding claim 1, for example, the answer to this issue is set forth in the second operation, which explicitly states that “if a workflow is completed by a first workflow engine for an execution-requesting client, sending an explicit and delayed acknowledgement to the execution-requesting client, else assigning the workflow to a second workflow engine”. Applicants’ reply is that the first client is not linked only to the first workflow engine, and that a second client is not linked only to the second workflow engine. If, for a particular client, the workflow execution fails on a first workflow engine, then execution is transferred to a second workflow engine. If execution fails on the second workflow engine, execution is transferred to a third workflow engine, and so forth, up to the limit of workflow engines in the data processing system.

3) The Examiner asserted that, in other words, it is unclear whether or not there is a workflow engine for every client.

In response, Applicants assert that regarding claim 1, for example, the answer to this issue is that the data processing system contains “M” clients (see FIG. 3) and “N” workflow engines” (see FIG. 2). Thus, the number of clients can range between 1 and M, and the number of workflow engines can range between 2 and N. The answer to the Examiner’s question is that every client has at least one workflow engine available to its use, and it can have a second workflow engine assigned to it, if necessary. However, every client need not have a unique workflow engine dedicated solely to its use.

4) The Examiner asserted that it is unclear whether or not the first client can communicate with the second workflow engine.

In response, Applicants respectfully assert that regarding claim 1, for example, the answer to this issue is that it is not relevant to the subject matter recited in claim 1. Nothing in claim 1 describes any communication by a first client, either with a first workflow engine or with a second workflow engine.

5) The Examiner asserted that it is unclear whether or not there is the same number of workflow engines as clients.

In response, Applicants assert that regarding claim 1, for example, the answer to this issue is found above in the answer to question 3).

Regarding independent claims 9, 17, 22, 27, and 32, the same responses apply as were provided above regarding independent claim 1.

The Examiner mentioned in his most recent Office Action that the rejection of claims 1, 9, 17, 22, 27, and 32 under 35 U.S.C. §112, second paragraph, refers to the claims and not to the specification. Applicants definitely understand this and wish to point out that Applicants' referrals to certain portions of the specification are merely to assist the Examiner, if necessary, in understanding the recited claim language.

Reiteration of Applicants' Arguments from Applicants' Previously Filed Response

The following arguments were presented in Applicants' previously filed response and are repeated below merely for purposes of supporting Applicants' position if it becomes necessary to appeal the Examiner's Final Rejection of the claims.

The Examiner asserted that it is unclear whether or not there is a workflow engine for every client. Applicants assert that the relationship between workflow engines and client processes within an embodiment of Applicants' data processing system is clearly described in Applicants' written description, for example, in the paragraphs beginning on page 5, line 27, and on page 6, line 17, respectively. Claim 1 recites in part:

if a workflow is completed by a first workflow engine for an execution-requesting client, sending an explicit and delayed acknowledgement to the execution-requesting client, else assigning the workflow to a second workflow engine.

It should be clear that a second workflow engine may be assigned to an execution-requesting client, if an explicit and delayed acknowledgement is not sent to the execution-requesting client. In claim 1, it is unnecessary to recite whether or not there is a workflow engine for every client, because the claim describes operations that only need to involve one execution-requesting client. The same argument applies to claims 9, 17, 22, 27, and 32.

The Examiner also asserted that it is unclear whether or not the first client can communicate with the second workflow engine. In response, Applicants assert that whether or not the first client can communicate with the second workflow engine is not relevant to the subject matter recited in claim 1, because claim 1 is involved with assigning a second workflow engine to the execution-requesting client, if an explicit and delayed acknowledgement is not sent to the execution-requesting client. The same argument applies to claims 9, 17, 22, 27, and 32.

The Examiner further asserted that it is unclear whether or not there is the same number of workflow engines as clients. In response, Applicants again assert that the relationship between workflow engines and client processes within an embodiment of Applicants' data processing system is clearly described in Applicants' written description, for example, in the paragraphs beginning on page 5, line 27, and on page 6, line 17, respectively. Moreover, Applicants assert that this question is not relevant to the subject matter recited in claim 1, because claim 1 is involved with first and second workflow engines of a plurality of workflow engines and at least one execution-requesting client of one or more execution-requesting clients. Applicants should not have to specify the relationship between the number of workflow engines and the number of execution-requesting clients. The same argument applies to claims 9, 17, 22, 27, and 32.

For the above reasons, Applicants respectfully request that the rejection of claims 1, 9, 17, 22, 27, and 32 under 35 U.S.C. §112, second paragraph, be withdrawn.

**Rejection of Claims 1-36 under 35 U.S.C. §103(a) as Unpatentable
over Campbell in view of Nakamura**

Claims 1-36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Campbell et al. (U.S. 2001/0024497 A1) in view of Nakamura et al. (U.S. 2001/0027477 A1).

Campbell discloses (see Abstract) a system and method for servicing multi-media customer communications to geographically distributed agents from multiple call center sites via the telephone network and a global data communications network. Applicants could find no disclosure in Campbell concerning sending an explicit and delayed acknowledgement to an execution-requesting client if a workflow is completed by a first workflow engine, else assigning the workflow to a second workflow engine. It is noted that the Examiner concedes this in his Office Action.

Nakamura discloses (see Abstract) a workflow-controlling system comprising a server 110 (FIG. 1) and a plurality of client terminals 130, 140, and 150. Nakamura states that “a flow control section that is a central component of the present invention exists on server 110, and documents are managed by this section” (Para. 72). Thus, Nakamura discloses only a single workflow engine. Nakamura’s “terminals” are merely client apparatus (Para. 72), not workflow engines.

The Examiner stated that Nakamura teaches determining whether a first workflow is completed by a first client/terminal and, if complete, a notification is sent; if not completed, then a different notification is sent so that the second terminal/client can be assigned the workflow, citing Paras. 11 and 12.

However, Applicants respectfully assert that the Examiner is not construing Nakamura’s disclosure correctly in Paras. 11 and 12. The “update request” operation described in Nakamura’s Paras. 11 and 12 is described in detail in Para. 98 regarding FIGS. 9 and 10. It will be noted that Nakamura uses the term “completed”, regarding a workflow, to mean “finished” or “concluded” with respect to all clients, not just one client. Thus Para. 98 explains that if an “update request” is not completed, then one or more additional terminal/clients/participants (i.e. participants #2 and #3, FIG. 10) are notified that they may provide input. This is a very different operation from that described in Applicants’ claim 1, in which a workflow is assigned to a second workflow engine if a workflow is not completed by a first workflow engine for a client.

Applicants could find no disclosure in Nakamura concerning sending an explicit and delayed acknowledgement to an execution-requesting client if a workflow is completed by a first workflow engine, else assigning the workflow to a second workflow engine. As mentioned

above, Nakamura discloses only a single workflow engine (server 110), so Nakamura cannot assign the workflow to a second workflow engine.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the prior art reference (or references when combined) must teach or suggest every limitation of the claim. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). MPEP §2143.

The Examiner's asserted combination of Campbell in view of Nakamura fails to teach or suggest all of the claim limitations present in independent claims 1, 9, 17, 22, 27, and 32, so a *prima facie* case of obviousness has not been established.

For example, neither Campbell nor Nakamura disclose sending an explicit and delayed acknowledgement to an execution-requesting client if a workflow is completed by a first workflow engine, else assigning the workflow to a second workflow engine

For the above reasons, claims 1, 9, 17, 22, 27, and 32 should be found to be allowable over any combination of Campbell and Nakamura, and Applicants respectfully request that the rejection of claims 1, 9, 17, 22, 27, and 32 under 35 U.S.C. §103(a) as being unpatentable over Campbell in view of Nakamura should be withdrawn.

Claims 2-8, 10-16, 18-21, 23-26, 28-31, and 33-36, which depend from claims 1, 9, 17, 22, 27, and 32, respectively, and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Additional Elements and Limitations

Applicants consider additional elements and limitations of claims 1-36 to further distinguish over the cited references, and Applicants reserve the right to present arguments to this effect at a later date.

RESPONSE UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE

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Title: FAULT-TOLERANT SYSTEM AND METHODS WITH TRUSTED MESSAGE ACKNOWLEDGMENT (As Amended)

Assignee: Intel Corporation

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Conclusion

Applicants respectfully submit that claims 1-36 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney, Walter W. Nielsen (located in Phoenix, Arizona) at (602) 298-8920, or the below-signed attorney (located in Minneapolis, Minnesota) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

MINGQIU SUN ET AL.

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Date June 13, 2005

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 13TH day of June, 2005.

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